



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,988	04/18/2001	Scott Douglas Olmstead	LUC-307/OLMSTEAD 3-1-1-2	9065
32205	7590	11/15/2005	EXAMINER	
CARMEN B. PATTI & ASSOCIATES, LLC ONE NORTH LASALLE STREET 44TH FLOOR CHICAGO, IL 60602			FOX, BRYAN J	
		ART UNIT	PAPER NUMBER	
			2686	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/836,988	OLMSTEAD ET AL.
	Examiner Bryan J. Fox	Art Unit 2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 June 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4,6,7,16,21,25 and 26 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,4,6,7,16,21,25 and 26 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities: lines 10, 13, 14, 17 and 19 recite the limitation “the GMSC2.” There is insufficient antecedent basis for this limitation. Specifically, the applicant introduces “a gateway mobile switching center of the second network,” with a parenthetical reference to GMSC2. The applicant should use the same term introduced. Similarly, the limitation “the HLR” is used in lines 14, 16 and 18. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (US005890063A) in view of Ahrens (US005848144A).

Regarding **claim 1**, Mills discloses a system to transport signals to a mobile station ported from one HLR to another HLR where mobile subscribers relocate from a first service area served by a first HLR to a second service area served by a second HLR (see column 1, lines 39-42), which reads on the claimed “migrating subscribers from a first network to a second network”. The system transfers an IAM from another

network, or incoming signal (see column 8, lines 9-10) from the GMSC 80 a in a first network to the GMSC 80 b in a second network (see column 8, lines 34-41), which reads on the claimed "transferring at least one connection from at least one other network from a gateway mobile switching center of the first network (GMSC1) to a gateway mobile switching center of the second network." The second HLR 90b identifies the MSC currently serving the MS (see figure 9 and column 8, lines 24-60), which reads on the claimed "updating a home location register (HLR) in the second network with routing information about subscribers now served by the second network that were previously served by the first network." The HLR is queried for routing information, and if the number is in the network, the correct routing information is returned. However, if the number has been ported, the HLR returns the new HLR and the call is rerouted (see column 8, lines 34-60). This meets the limitation of "if routing information for the destination subscriber is available from the HLR in response to the query, the GMSC2 routes the call to the second network; if no routing information is available in response to the query, the GMSC2 routes the call to the first network." Call requests are directed to the first GMSC (see figure 9), in contrast to the claimed invention where call requests are directed to the second GMSC. Mills also fails to expressly disclose that the first network employs a different technology than the second network.

In a similar field of endeavor, Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two

networks must use different technologies, which reads on the claimed "the second network employs a network technology different than a network technology employed by the first". Further, after a midpoint of migrating subscribers, all traffic is routed to the post-cut switch (see figures 3 and 5a-5d), which reads on the claimed invention that directs all call requests directly to the switch of the second network. The resultant combination reads on the claimed "querying the HLR by the GMSC2 for routing information for a destination subscriber upon receiving one of said call requests where the GMSC2 queries the HLR without requiring routing information obtained in response to a query to the another HLR."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above routing to the post-cut switch after a midpoint and networks using different technologies disclosed by Ahrens in order to provide more compatibility among systems and reduce the required capacity of the cutover facility.

Regarding **claim 4**, the combination of Mills and Ahrens discloses that if an incoming signal is received by the original network that is intended for the new network, the new network address is returned to the GMSC (see Mills column 2, lines 62-67 and column 3, lines 1-4). By returning the new network address to the GMSC, the original network is informing the GMSC that routing information is not available in its network.

Regarding **claim 16**, Mills discloses a system to transport signals to a mobile station ported from one HLR to another HLR where mobile subscribers relocate from a first service area served by a first HLR to a second service area served by a second

HLR (see column 1, lines 39-42). An IAM from another network, or incoming signal is received at the GMSC 80a (see column 8, lines 9-10), which reads on the claimed "receiver arranged and constructed to receive a first call directed to a first subscriber, wherein the first subscriber is associated with one of the first and second networks," and, "the receiver directly receiving all calls directed to subscribers of the first and second networks." The GMSC 80a requests routing information from HLR 90a (see column 8, lines 24-27 and figures 8 and 9), which reads on the claimed "home location register (HLR) serving the second network where the HLR contains routing information for subscribers of the second network," and, "query device arranged and constructed to query the HLR of the second network to obtain routing information for the call." If the number has been ported away, the HLR does not have routing information, but instead points to HLR 90b containing the routing information (see column 8, lines 28-37), which reads on the claimed "router coupled to the query device that will route the first call to the second network if a query by the query device for routing information about the first subscriber obtains routing information for the first subscriber from the HLR, the router routing the first call to the first network if a query by the query device for routing information about the first subscriber does not obtain any routing information for the first subscriber from the HLR." Mills fails to expressly disclose that the second network employs a different technology than the first network.

In a similar field of endeavor, Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two

networks must use different technologies, which reads on the claimed "the second network employs a network technology different than a network technology employed by the first."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above networks using different technologies disclosed by Ahrens in order to provide more compatibility among systems. The resultant combination reads on the claimed, "query device arranged and constructed to query the HLR of the second network to obtain routing information for the call without requiring routing information obtained in response to a query to another HLR in the first network."

Regarding **claim 21**, the above combination of Mills and Ahrens discloses that the receiver is a GMSC (see Mills column 8, lines 9-12 and figures 8 and 9).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills in view of Ahrens as applied to claim 1 above, and further in view of Widmark et al (US005504804A).

Regarding **claim 6**, the combination of Mills and Ahrens fails to expressly disclose sending, to the another home location register of the first network, a message notifying the first network that a subscriber associated with the call is actively engaged in a call on the second network when the GMSC2 routes the call to the second network.

In a similar field of endeavor, Widmark et al disclose a system where the MSC returns a busy status to the HLR when the MS is busy (see column 11, lines 11-62 and figure 6).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Mills and Ahrens with Widmark et al to include the above busy notification in order to provide convenient features to the user such as call forwarding on busy as suggested by Widmark et al column 7, lines 23-51).

Claims 7, 25 and 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills in view of Ahrens as applied to claims 1 and 16 above, and further in view of what was well known at the time of the invention (see MPEP 2144.03).

Regarding **claim 7**, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23). Mills fails to disclose that the first network is a TDMA network. The examiner takes official notice that a TDMA network was well known in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Regarding **claim 25**, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23), which reads on the claimed "network technology of the first network comprises one of...a global system for mobile

communication network technology". Mills fails to disclose that the second network is a TDMA network.

The examiner takes official notice that a TDMA network was known in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Regarding **claim 26**, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23), which reads on the claimed "network technology of the first network comprises one of...a global system for mobile communication network technology". Mills fails to disclose that the second network is a TDMA network.

The examiner takes official notice that a TDMA network was known in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 6, 7, 16, 21, 25 and 26 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues the official notice taken by the examiner is improper. The examiner respectfully disagrees. The applicant argues that the official notice was challenged in a previous action, however, only the motivation used was mentioned in the arguments. The official notice was therefore not adequately traversed (see MPEP 2144.03). The examiner further directs the applicant to look at US Publication Number US 20020123307A1 (Winarski), paragraph 5, where a migration from TDMA to EDGE (GSM) is disclosed.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryan Fox  
November 7, 2005

  
CHARLES APPIAH  
PRIMARY EXAMINER